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# REALISM AND THE NATURE OF PERCEPTUAL EXPERIENCE

BILL BREWER

Realism concerning a given domain of things is the view that the things in that domain exist, and are as they are, quite independently of anyone's thought or experience of them. The realism which I am concerned with here is empirical realism, that is, realism concerning empirical things, which are the ordinary persisting things presented to us in our perception of the world around us. Empirical realism is thus the doctrine that the tables, trees, people and other animals, which we see, feel, hear, and so on, exist, and are as they are, quite independently of anyone's thought or experience of them. My question is which account of the nature of perceptual experience is most conducive to this commonsense realist world-view.

I start, in section I, by partitioning the possible accounts of the nature of perceptual experience into two groups, and clarifying in some detail precisely what this distinction between them consists in. In section II, I argue that accounts of one of these two fundamental kinds are either inconsistent with empirical realism, or entail that our knowledge of empirical things is irremediably severely limited, in a way which is sufficiently counterintuitive to constitute a reductio. In section III, I further divide the alternative accounts of the nature of perceptual experience into two, and offer some provisional grounds at least for exploring the merits of those in the more ambitious, and

less familiar, of these sub-groups.<sup>1</sup> Section IV presents a new approach to how such accounts should treat various kinds of perceptual illusion, which I argue is extremely promising. I conclude, in section V, with a summary of my results.

## I

Perceptual experience in some way presents us with the world of empirical things around us: the empirical world. A fundamental distinction can be drawn between accounts of the nature of such experience as follows.

- (1) Perceptual experience itself is to be construed as awareness of mind-dependent entities.
- (2) Perceptual experience is to be construed as mind-dependent awareness of potentially mind-independent things.

Although the distinction is commonplace and pre-theoretically accessible, it is seldom, if ever, made absolutely explicit. On my understanding, it concerns the relative priority of the individuation, on the one hand, of subjective experiences themselves, and, on the other hand, of the empirical things of which those experiences may constitute a presentation. The underlying thought here is that perceiving involves a way of being

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<sup>1</sup> The same choice at this point has recently also been urged by John Campbell (2002), Mike Martin (2002) and Charles Travis (2004). Travis firmly acknowledges Austin (1964).

conscious, perceptual experience, and that the most fundamental question is therefore how to characterize the ways of being conscious which perceiving involves. I take the opposition between (1) and (2) to consist in a difference of opinion over how this question is to be answered. Proponents of (1) characterize the ways of being conscious which are involved in perceiving without any reference whatsoever to the ways mind-independent empirical things might be, whereas proponents of (2) insist that these ways of being conscious can only be characterized in terms of the ways such things might be or actually are in the empirical world perceived. Thus, according to (1), the experiences involved in perceiving are to be characterized prior to, and independently of, any characterization of the empirical things which are in some way to be presented by them. In contrast, the force of (2) is to insist that perceptual experiences themselves can only be characterized by appeal to a prior and independent characterization of the empirical things which they may present.

These two possibilities correspond, respectively, to the standard way of thinking of the relation between secondary qualities and experiences of those qualities, on the one hand, and primary qualities and experiences of those qualities, on the other. Thus, the orthodoxy has it that the most basic distinctions concerning the secondary qualities are between, say, red-type and green-type experiences, and the rest, conceived quite independently of the question of what their worldly correlates, if any, may be. The characterization of such experiences is prior to, and independent of, any characterization of the worldly qualities which are in some way presented by them. Having given such a characterization, of red-type experiences, say, we may then define a property - redness -

which applies to mind-independent objects, as that of being disposed to produce those kinds of experiences - red-type ones - or, alternatively, as the property of having whatever underlying physical constitution happens in the actual world to ground that disposition. Conversely, on the standard view, the most basic distinctions concerning the primary qualities are those between, say, squareness and circularity, and the rest, as properties of mind-independent things. Having first identified which property squareness is, we can then identify square-type experiences as those which present something as having that property – squareness. So, the relevant experiences are to be characterized only by appeal to a prior, and independent, characterization of the worldly qualities which they may present.<sup>2</sup>

Thus, (1) is to be explicated by what I call the secondary quality model.

- (S) Perceptual experiences are to be characterized prior to, and independently of, any characterization of the empirical things which are in some way presented by them.

Similarly, (2) is to be explicated by the corresponding primary quality model.

- (P) Perceptual experiences can only be characterized by appeal to a prior, and independent, characterization of the empirical things which they may present.

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<sup>2</sup>This way of setting out the orthodoxy is very much indebted to John Campbell (1993). Like him, though, I myself reject the orthodoxy concerning secondary qualities. A third, ‘no-priority’, view may also be proposed (McDowell, 1981). I must confess myself quite unable to give any determinate content to that, though.

This clarification of the initial partition of accounts of the nature of perceptual experience by (1) and (2), and especially its explication by appeal to a standard view of the distinction between primary and secondary qualities, brings out the possibility of various mixed positions, on which some features of experience are to be characterized according to (S), whilst others are to be characterized according to (P). Accordingly, I intend by (S) to identify only those accounts on which every feature of perceptual experience is to be characterized prior to, and independently of, any characterization of the empirical things which are in some way presented. (P) applies to any account on which at least some features of perceptual experience can only be characterized by appeal to a prior, and independent, characterization of the empirical things which may be presented.

## II

I contend that (S) is either inconsistent with empirical realism, or entails a highly counterintuitive, and utterly irremediable ignorance concerning empirical things, which I argue should be treated as a reductio ad absurdum. This is not, or at least not just, the familiar point that proponents of (1) are unavoidably prone to scepticism, because there are perceptually identical scenarios in which the relevant mind-dependent entities remain the same whilst the external world varies dramatically. There are well known epistemic externalist responses to that point, of the kind inspired by Dretske and Nozick,<sup>3</sup> and,

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<sup>3</sup> See Dretske (1971); and Nozick (1981, ch. 3).

regardless of the ultimate merits of these views, the debate is at the least a delicate one.<sup>4</sup>

The worry is rather that the realist proponent of (S) is bound to deny a person a certain kind of basic knowledge, or even understanding, of what kinds of entities the various kinds of empirical things might be. To put it crudely, it is not that we have a perfectly good understanding of the basic natures of empirical things, but must admit that our beliefs about them have dubious epistemic credentials. Rather, we must face the fact that we are constitutionally incapable of grasping the basic natures of empirical things at all.

The question to press against the proponent of (S), in order to launch this line of objection, is what conception she can possibly make available to a person of the empirical things supposedly presented to him in perception?<sup>5</sup>

A first suggestion is that a person should conceive of empirical things as composed out of the entities of which he is directly aware in such perception as their parts. On this view, a conception of empirical things is constructed on the basis of perception by regarding empirical things themselves as constructions out of the entities of which perceptual experiences are a person's direct awareness. The whole point of the current account of the nature of perceptual experience, though, is that these are mind-dependent

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<sup>4</sup> Ch. 4 of my 1999 pursues this debate in a way which is critical of epistemic externalism of this kind. The source of the difficulties I find with it, though, is a failure properly to account for the understanding of beliefs about empirical things rather than any purely epistemic requirement.

<sup>5</sup> The difficulty here is very much the difficulty which Berkeley (1975a, 1975b) raises for his realist opponent Locke (1975), with his insistence that "an idea can be like nothing but an idea" (Berkeley, 1975b, § 8).



entities. The result is precisely Berkeley's position.<sup>6</sup> Although there is some latitude in the details of its development, it is, as he is fully aware, bound to lead to a form of empirical idealism. For, if empirical things are conceived as a construct of some kind out of mind-dependent entities, then they cannot themselves be genuinely mind-independent. It may be possible to accommodate, within this way of thinking, a degree of incompleteness and inaccuracy in a given person's view of the empirical world; but the world itself is absolutely explicitly mind-dependent in nature.

The obvious alternative, which is of course the standard realist view, given this account of the nature of perceptual experience, is that a person should think of empirical things as the explanatory causes of such experience. Empirical things, on this view, are effectively theoretical postulates, involved in explanation of the order and nature of perceptual experience. Now, such experience may have mind-independent causes. For all the subject knows, though, it may equally well not have. In any case, this recipe provides him with no inkling whatsoever of what such things, in themselves, might actually be. For, according to (S), perceptual experiences are to be characterized prior to, and independently of, any characterization of the empirical things which are in some way presented by them. That is to say, no reference whatsoever may be made to empirical things in the characterization of such experiences themselves. So nothing can possibly be discovered about the natures of such things from a person's having those experiences. In Michael Ayers' (1991) terms, perceptual experiences are simply blank effects. What on

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<sup>6</sup>At least in the Dialogues (1975a). See Foster (1985), for discussion of the metaphysical variation in Berkeley's work; and see pp. \*\*-\* below for an account of where the phenomenalism of the Principles (1975b) fits into my own argument.

earth the empirical things might be like which cause them is quite obscure so far as a person's possession of these experiences themselves is concerned. Hence perceptual experience fails to provide any proper conception of the nature of such things at all. Put the other way around, whatever it may be that a person comes to think of in this way as the explanatory causes of his experience, it is not the constituents of the empirical world: this world, the world we all know and love, of tables, trees, people and other animals. So, even if the relevant causes of experience did turn out, fortuitously, as it were, to be mind-independent, this would be no help at all to the empirical realist. For his concern is with the mind-independence of the very things which are presented to us in perception in this way.

Proponents of (S) are therefore quite incapable of providing a person with any satisfactory conception of mind-independent empirical things at all. Either they provide a perfectly intelligible conception of something which is bound to be mind-dependent, or they gesture in the direction of something which may be mind-independent, yet of which they provide no illuminating conception whatsoever, and which is therefore not a constituent of the empirical world which is presented in perception: whatever else it may be, it certainly isn't one of these – a table, tree, person or other animal.<sup>7</sup>

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<sup>7</sup>This is, I think, precisely the dilemma which Berkeley (1975b, § 8) offers his Lockean (1975) realist opponent, especially in objection to the claim that our ideas of the primary qualities at least resemble the real physical qualities of mind-independent things, and hence that they provide us with a sensory-based conception of the nature of such things. In Berkeley's terms the argument goes like this. Physical qualities are either perceptible or they are not. If they are, then they are ideas, and are therefore manifestly mind-dependent. If they are not, then they cannot possibly resemble our ideas, which are therefore incapable of providing any intelligible conception of the qualities of things in a mind-independent empirical world.

There may appear to be a way for the advocate of (S) to avoid my objection to the second approach outlined above, of identifying empirical things as the explanatory causes of perceptual experience. She may attempt to characterize them simply as powers actually to produce our actual experience, and counterfactually to produce suitably related alternative experience in suitably related circumstances, rather as the mysterious noumenal grounds of such powers. This is really just a form of phenomenalism, though, and does not constitute a vindication of empirical realism at all. It is in fact quite closely related to the explicit idealism of the first approach which I considered above to the question of how proponents of (S) might account for a person's conception of the natures of the empirical things presented to him in perception. According to the current suggestion, empirical things are not to be constructed directly out of mind-dependent entities as their parts, as on that earlier view. Rather, true sentences 'about' physical objects are held to be true purely in virtue of the basic facts about the actual and counterfactual order of appropriate perceptual experiences.<sup>8</sup> Still, there are, on both accounts, strictly speaking, no mind-independent tables, trees, people or other animals. Although sentences such as 'the table remains as it is in my office when I leave' are indeed true, on the present view, they are true solely in virtue of the fact that I and others would have perceptual experiences of various kinds if we remained in, or (re-) entered, my office –whatever exactly that is held to involve – and not in virtue of the existence in reality of a mind-independent thing which is my table, whose existence and nature is the categorical ground of such experiential counterfactuals. Thus, we may clarify what we

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<sup>8</sup>This is perhaps the metaphysics of Berkeley's Principles (1975b). See again Foster (1985).

always had in mind as empirical realism as follows. There is in reality a domain of entities, which are presented to us in perception, to which we refer with our ordinary terms for empirical things – table, tree, person, and the like – and whose mind-independent natures determine the truth or falsity of our beliefs expressed using these terms. The current phenomenalist account does not secure empirical realism for the proponent of (S).

There is, perhaps, a more significant worry at this point, though. Proponents of (S) who wish to identify empirical things as the explanatory causes of perceptual experience face the following choice. Either tables, trees, people and so on, are construed simply as powers to produce such experience in us, or they are construed as the categorical grounds of those powers. My objection to the former is that it entails a version of phenomenalism, which is incompatible with empirical realism; and to the latter I object that it fails to provide any genuine conception of the constituents of the empirical world at all, and so equally fails to vindicate empirical realism. The difficulty, in the latter case, is that we are consigned to complete ignorance of the basic natures of the proposed empirical things, which therefore cannot actually be, as they are supposed to be, the constituents of the world which is presented to us in perception. Friends of (S) may well reply that my inference, from the fact that their view leaves us quite ignorant in this way about the basic natures of empirical things, to the conclusion that they therefore fail to provide an adequate construal of the constituents of the empirical world which is presented to us in

perception, is invalid. For such ignorance is precisely, and necessarily, a person's epistemic position with respect to the things presented to her in perception.<sup>9</sup>

So the crucial question now is whether the thesis that we are irremediably ignorant of the basic natures, that is to say, the intrinsic, categorical properties, of empirical things, which, following Langton (1998), I call the Humility Thesis (HT), is a reductio ad absurdum of (S), or a substantive philosophical truth, derivable from (S) rather than in any tension with it.

First, it must be stressed just how strongly counterintuitive (HT) is. It is not just the mild, and no doubt true, claim that there are some categorical properties of empirical things which we happen not to know, or even the idea that we will very likely never know all of them. It is rather the far more radical claim that we are necessarily, irremediably, utterly ignorant of every single one of them. For, recall that (S) requires that perceptual experiences are to be characterized prior to, and independently of, any characterization of the empirical things which are in some way presented by them. Hence the characterization of experience cannot make any reference at all to the nature of empirical things themselves. So nothing about the categorical natures of such things in the world can possibly be known simply in virtue of being the subject of perceptual experience.

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<sup>9</sup> Langton (1998) ascribes to Kant this very account of our epistemic relation with empirical things; and Lewis (2002) defends it as correct in itself.

Second, it is equally important, as I mentioned earlier, properly to distinguish (HT) from any standard sceptical challenge to our knowledge of the external world. It is not that we have a clear conception of a way the empirical world might be, which is nevertheless of questionable epistemic standing. Rather, any purported such conception is bound to be entirely lacking in determinacy as to the basic natures of its constituent ingredients: the empirical things themselves whose condition it purports to characterize. That is to say, proponents of (S) endorsing (HT) in this way face a serious threat to the very idea that the mind-independent things which they postulate in causal explanation of perceptual experience really are empirical things at all. For empirical things are by definition those things which are presented to us in perception – tables, trees, people and other animals etc. In being so presented to him, a person seems at the very least to have some conception of what the basic natures of such things would be were there actually to be any in mind-independent reality. So (S)'s proposed 'empirical things', of which we are constitutionally ignorant of such basic natures, cannot be genuine empirical things at all. Thus (S) fails, as I contend, to provide a genuine vindication of empirical realism.

Third, there is implicit in the discussion of the previous paragraph the following direct argument against (HT). Empirical things are those things, such as tables, trees, people and other animals, which are presented to us in perception. We are aware of the basic natures of the things which are presented to us in perception. Therefore, we are not constitutionally ignorant of the basic natures of empirical things.

Of course, the supporter of (HT) will deny the premise that we are aware of the basic natures of the things which are presented to us in perception. Indeed, Langton's (1998) Kantian argument explicitly moves from the perceptual presentation of empirical things to our ignorance of their basic natures via premises concerning the causal nature of perception and the irreducibility of relational to intrinsic properties. The idea is that perception essentially involves a person's being experientially affected by empirical things; and, since the nature of such effects, as with the relation between cause and effect quite generally, is logically independent of the basic natures of their empirical causes, with no a priori connections discernible between them, perception can furnish no knowledge of the basic natures of empirical things.

The general principle concerning causation is mistaken, though. For there are many cases of a priori, necessarily connected causally related phenomena. For example, the rolling behaviour of round wheels, of appropriate rigidity and so on, is an a priori necessary consequence of their shape, on which it nevertheless causally depends. This is the great insight of Locke's mechanism: the smith appreciates, without trial or experiment, as he says, that "the turning of one Key will open a Lock, and not the turning of another" (1975, IV.iii.25). Furthermore, the causal dependence of experiences of primary qualities on the primary qualities of their objects is a paradigm case of this phenomenon, as explicitly articulated by (P). For the intrinsic nature of experiences of squareness, say, is on that account to be characterized precisely in terms of that very property of mind-independent things which they present, that is, squareness, and upon which they nevertheless normally causally depend. Thus, Langton's Kant is right that (S)

leads to (HT), but wrong in assuming that this is obligatory, however unacceptable it may be. For, (S) is not the only account of the nature of perceptual experience: (P) is an explicit alternative, which does not entail (HT). So I propose that we should treat the derivation of (HT) as I recommend above, as a reductio of (S), and an invitation at least to explore the credentials of (P).

I therefore assume in what follows that perceptual experience is to be construed as mind-dependent awareness of potentially mind-independent things. That is to say, perceptual experiences can only be characterized by appeal to a prior, and independent, characterization of the empirical things which they may present.

### III

The standard way in which the characterization of perceptual experiences may be thought to be dependent upon a prior characterization of empirical things is the Content View (CV), which holds that sentences describing ways empirical things may be in the mind-independent world in one way or another characterize experiences by giving their representational content: the way they represent such things as being out there. When an experience with such a content is appropriately caused by things' being roughly as described, then it presents those things as being just that way.

Here I simply raise two difficulties for (CV), before turning my attention to what I regard as a more promising approach. The first is really just a challenge, both to identify



the vehicles of perceptual representation, and to give an account of how those vehicles attain their representational content. The difficulty is just that, although this approach is definitely the orthodoxy, no agreed satisfactory response has so far been given on either score. The second problem can be put in the form of a dilemma. Are the representational contents of perceptual experiences also possible contents of non-experiential thought or belief? If so, then what is added, in perception, to yield its characteristically conscious, experiential, nature; and how is this experiential additive to be accommodated in a satisfactorily naturalistic world-view? If not, then how are we to identify the essentially experiential representational contents, and explain their status as such? Again, the dilemma simply presents a challenge to proponents of (CV); but still, it is one which has resolutely resisted any convincing treatment that I am aware of.<sup>10</sup>

I have so far traced a portion of the following natural route towards (CV). (1) is motivated jointly by (a) a commonsense phenomenological conviction, that perception acquaints us with a domain of entities whose basic natures themselves constitute the subjective character of perceptual experience, and (b) the conclusion of a traditional philosophical argument from illusion, that these direct objects of acquaintance cannot be tables, trees people and other animals themselves, for in cases of illusion their properties differ; hence mind-independent empirical things are presented only indirectly in perception. This is (S); and I argued above that it cannot sustain any satisfying empirical realism. Proponents of (CV) move on by rejecting (a) the phenomenological conviction in favour of (b) the philosophical conclusion. Perceiving is not to be thought of, in the

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<sup>10</sup> These two challenges clearly raise a vast number of controversial issues which I cannot even begin to address here.

first instance, as being acquainted with any kind of entity whose basic nature constitutes its subjective character. Instead, it is to be construed as somehow entertaining a representation of a way the mind-independent world might be, whose degree of accuracy or inaccuracy in connection with how things actually are out there determines the extent to which the relevant perception is veridical or illusory.

Given the two difficulties raised above, I suggest that we at least take seriously the idea of reversing the preferences definitive of (CV), by jettisoning (b) the philosophical conclusion of the argument from illusion in favour of (a) the commonsense phenomenological conviction that perception involves acquaintance with entities whose basic natures constitute its subjective character. On such a view, the phenomenon of illusion does not force us to distinguish any such entities from mind-independent things. Thus, perception is an openness to, or acquaintance with, mind-independent empirical things themselves, whose basic natures and perceptible qualities constitute what it is like to be presented with them in this way. What it is like for a person, perceiving the world as she is, is to be characterized by citing the perceptible features of the specific mind-independent empirical things which are accessible to her in perception, given her point of view on the world and the relevant perceptual conditions. In contrast with (CV), I call this the Object View (OV).

A certain amount of work in cognitive psychology, and especially psychophysics, gives the initial impression of sympathy towards (S), and therefore an inclination towards some form of idealism. This comes out in the apparent assumption that perceptual

experiences are ‘located’ in some way ‘downstream’ of neural perceptual processing, and are therefore quite independent of their worldly causes, if any, or whatever these may turn out to be. At the same time, I think that there is a perfectly natural way of taking the guiding questions in this area as deeply sympathetic to (P) in its current (OV) form. A major goal of this work is to uncover the role of various neural processing systems in subserving perceptual consciousness of various specific kinds; and the approach is to investigate which of the actual perceptible features of the empirical things around a person, or other animal, are made accessible to him by the operation of which such systems. That is to say, the background picture is precisely that the nature of the perceptual consciousness which is the target of investigation is to be understood in terms of the perceptible features of the mind-independent empirical things which are made accessible to the subject in question by the functioning of the neural processing systems under study as these enable his various differential responses to them.

The obvious challenge to (OV), of course, is to give a proper account of perceptual illusion. How, if perceptual experiences are to be characterized by the perceptible features of the actual mind-independent empirical things which are made accessible to the subject in them, are such illusions ever possible? It is this issue to which I now turn.

#### IV

The key idea is Berkeley’s (1975a, 1975b), that the locus of error in cases of illusion is the subject’s judgements, or expectations, about the world, rather than any aspect of

perceptual experience itself. On the current proposal, this simply acquaints him with various mind-independent things, whose actual perceptible features constitute the subjective quality of his experience. There are two slightly different types of illusion along these lines, of which the Müller-Lyer and the stick part-submerged in water are paradigm examples respectively. I shall explain in some detail how each is to be accommodated, according to (OV), and develop some further speculations concerning related cases of each type.<sup>11</sup>

1. The Müller-Lyer. The standard description of this case is that the two lines, which are really identical in length, nevertheless look different in length. I claim that, in normal conditions, good lighting, orthogonal viewing, and so on, perceptual experience itself presents the very lines out there, distributed in space as they actually are. In particular, their identity in length is a perceptible feature of the lines, which is made experientially accessible to the normal subject. Nevertheless, judgement is understandably lead astray by the hashes in arriving at the conclusion that the lines are different in length. On a popular view, this is due to the fact that one wrongly equates the length of each line with the distance between the centroids of the triangles two-thirds constituted by the relevant hashes, to which attention is quite naturally drawn. Even when a person knows that the lines are equal in length, and so does not actually judge that they are different in length, still, he feels an inclination to make that judgement of difference, for the reason just given, and this is what the persistence of the ‘illusion’ consists in, even for those of us in the know. I would make two points in favour of my claim of

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<sup>11</sup> Many thanks to John Campbell for pressing me at various points in the development of my views here.

experienced identity in length. First, if asked to point to the ends of the two lines, normal subjects point accurately, that is to say, they experience the endpoint of each line to be where it actually is. These pairs of points are of course equidistant. That is to say, the extents of space which the two lines are perceptually presented as occupying are identical. Their identity in length is a perceptible feature in part constitutive of normal subjects' experience of them. Second, the characteristic experience of gradual removal of the misleading hashes is not one of the lines changing in apparent length, but rather a realization that a previous judgement, or inclination to judgement, of difference in length was mistaken. That is to say, the constancy of the lines' actual distribution in space as the hashes are removed is evident; that this is an identity in extent between the two lines becomes gradually more obvious, and therefore the previous judgement of difference becomes evidently in error.

It might be objected that this account fails to do justice to the robust sense in which the lines still look unequal in length however familiar one may be with the illusion. Indeed, they still look unequal in length to a person so familiar with the illusion that she has no residual inclination whatsoever to judge that they are unequal. My reply is that even in this case, the subjective character of her experience evidently makes the mistaken judgement of inequality in length natural and explicable. This is what it means to say that they look unequal in length: the actual distribution of the lines and hashes in space, which constitute the subjective character of her experience, make manifest to her the naturalness and explicability of a judgement of inequality however disinclined she may be herself actually to make it. Consider a parallel case of inferential illusion. There are some invalid

mathematical inferences, in which a carefully concealed division by zero is made, for example, which remain evidently misleading even to a decently skilled mathematician who is utterly disinclined to believe their conclusion. For he can easily ‘see’ how others might be taken in by them: they retain that ‘look’ of validity. Other invalid inferences are poorly constructed, and so clearly would not fool anyone anyone. The Müller-Lyer is in my view analogous to the former. The lines look unequal in length, in this sense, even to somebody who knows full well that they are not. Taking her experience at face value, and disregarding extraneous information about how the illusion works, this makes a mistaken judgement of inequality in length evidently natural and explicable.

I would interpret Bruce Bridgeman’s (1997) fascinating experiments on frame-shifting illusions along similar; and this has significant implications for various theories about the bifurcation of visual processing pathways between a primarily action-guiding system and one more concerned with the identification and categorization of perceptually presented items. The basic frame-shifting illusion consists of the brief successive presentation, firstly, of a target object centrally placed in a rectangular frame, followed, second, by a display identical except for the translation of the frame a little to the left, say. Subjects robustly judge that the target object has moved to the right. Bridgeman modifies the conditions by moving the central target object half the distance to the left that the frame is moved in that same direction, in the second presentation. Subjects are divided into two groups and asked what they see in two different ways: first, simply to say what they think happened; second, to point to the target object in both presentations. Those in the first group mistakenly think that the target object moved to the right. Those

in the second group correctly point to the target object in both presentations: that is, they track its actual movement to the left.

One interpretation of these results is that conscious perceptual experience is itself ambiguous, or inconsistent, on the issue of the direction of the movement of the target object. We have to recognize two separate, anatomically distinguishable, visual processing systems, which subserve action-guidance and judgement respectively. In Bridgemen's conditions, these simultaneously yield contradictory experiences. The subjective qualities of perceptual experiences can be variously interrogated, and the product of such interrogation may depend upon the variety of interrogation adopted. The idea of a single fact about how things are in experience is therefore to be rejected (see, e.g, Milner & Goodale, 1995). I disagree with this interpretation. The subjective qualities of experience, in both original and modified conditions, are constituted by the actual spatial distribution of the various displays as these are accessible to the subject. This is what explains reliable tracking of the actual movement of the target object to the left in subjects' pointing in the Bridgeman case. Mistaken judgements, on the other hand, reflect a perfectly natural, and no doubt evolutionarily well grounded, standing assumption, implicit in the move from perceptual presentation to beliefs about how things are in the world presented, that movements in the frame are far less likely than movements in the target, and hence that changes in relative positions should be assigned to the latter rather than to the former. Generalizing the point, interrogation of perceptual processing in connection with action-guidance yields information concerning the neural enabling of conscious perceptual experience, whereas interrogation in connection with anatomically

distinct systems involved in the identification and categorization of perceptually presented items brings out the various assumptions implicit in the transition between direct perceptual openness to mind-independent empirical things, on the one hand, and our judgements, beliefs and expectations concerning them, on the other.

A diametrically opposed interpretation of Bridgeman's results is also available, on which experience itself illusorily presents the target as moving to the right, which explains subjects' mistaken judgements; correct tracking of its actual movement to the left in pointing being explained by the fact that parameters for visually-guided action are set by non-conscious visual representations. I do not mean to deny the coherence of this interpretation, or to deny that blindsight patients' success in certain action-tasks directed at targets in their blind field cry out for the postulation of non-conscious visual representations in the control and guidance of basic action in some cases. Nor do I wish to claim that subjects' actions quite generally offer an infallible guide to the subjective character of their experience however much this may conflict with other evidence, from their judgements, both about the world and about their experience, and from other sources. My point is far more limited. It is simply that the illusion which Bridgeman creates does not on its own constitute a counterexample to (OV). As things stand, the interpretation which I offer above is at the very least on a par with its various alternatives.

Other illusions involve blurring of some kind. For example, writing seen from a distance 'looks blurred'; but no mind-independent empirical thing is blurred. My description of this phenomenon is that the perceptible features accessible in such



experiences are relatively indeterminate, perhaps that there is such and such a rough distribution of dark shapes on a light background, or whatever: genuine features of the distant word itself, but insufficiently specific uniquely to determine which world it is, or even that it is a word as opposed to an abstract pattern. The blurredness consists in the subject's perfectly understandable incapacity to determine in judgement which word is seen, or even that what he sees is a word at all.

Relatedly, if an object is moved rapidly from side to side in front of a person's eyes, her visual experience of it begins to blur. Yet the object itself is not blurred in any way. In this case my account appeals to indeterminacy due to limitations of spatio-temporal, rather than purely spatial, acuity. Over a given short time-frame, the object is correctly visually placed somewhere in the range of its rapid movement, but cannot at any point be more precisely placed. This is its actual feature which constitutes the subjective character of the subject's perceptual experience.

2. The stick part-submerged in water. Here, the standard description is that a straight stick part-submerged in water nevertheless illusorily looks bent, or broken. I claim that the mind-independent things whose actual features and distribution in space constitute the subjective nature of this experience are the upper, unsubmerged, part of the stick, and the image from the subject's point of view of the lower half of the stick, refracted, as it is, through the water. Perfectly respectable optics ray diagrams allow the entirely mind-independent construction of the relevant refracted image. The 'illusion' consists in the error in judgement of taking that image to be identical to the lower half of

the stick itself. Compare the case of shadows. Macroscopic material objects cast visible shadows in sunlight. When we look at these shadows, the subjective qualities of our experiences are partially constituted by their perceptible features, such as their size and shape. Shadows are perfectly objective optical phenomena, and so are refracted images. The difference is just that the former are not inclined to mislead us in our judgements about how things are in the world we perceive, whereas the latter are. This is all that illusions of the current kind consist in. The stick looks bent in the sense that its submerged part produces a refracted image which is naturally and perfectly explicably apt to be identified with that part of the stick itself in the mistaken judgement that the stick is bent.

Consider, finally, the classic case of Stratton's (1896) inverting spectacles. Initially, the subjective qualities of the subject's perceptual experience are constituted by the perceptible features of the images of persisting things produced by the spectacles. Again, these are a perfectly mind-independent product of the distribution of such things in the world around him and the optical properties of the inverting lenses. Then, as he gets used to the spectacles, and in particular as he re-establishes working active engagement in the world, direct perceptual access to those persisting things themselves is re-enabled too. Thus, it becomes the case, once more, that the subjective qualities of his perceptual experience, and especially its spatial orientation, are constituted by the relevant features of those very things out there in the world beyond his inverting spectacles.

‘Illusions’, then, are absolutely not cases in which there is some kind of misrepresentation of reality by perceptual experience. For the subjective qualities of perceptual experiences are constituted by the various features of mind-independent things which are accessible to the subject, given the relevant conditions of perception, including possibly intervening devices, in those experiences. Rather, they are cases in which the way that the subject is most naturally inclined to judge the world to be, given which features of mind-independent reality are accessible to him in experience in this way, is systematically out of line with the way things actually are out there. Notice, therefore, that illusions constitute a direct counterexample, on my view, to Evans’ (1982) influential outer judgement model of introspection, according to which knowledge of the subjective qualities of perceptual experience is to be attained by subjects’ prefixing the judgements which they are naturally inclined to make, ignoring any extraneous information which they may have, about the way things are in the world around them, with the operator ‘it seems to me that ...’. This is especially clear in the case of the Müller-Lyer. For, in this case, the judgement that subjects are naturally inclined to make about the lines they see is that they are unequal in length. So, Evans’ formula yields the following experiential self-ascription: ‘it seems to me that the lines are unequal in length’. Yet I claim that the subjective qualities of subjects’ experience are constituted by the actual spatial qualities of the presented lines, which are in fact equal in length.

Not every case of a perceptual experience prompting a mistaken judgement constitutes an illusion. For example, if someone suddenly, and falsely, comes to believe that the world is about end on seeing a particular arrangement of furniture in a room, then

this clearly not a case of visual illusion of any kind. I do not have a fully satisfactory characterization here; but what we count as perceptual illusions are just those cases of perceptual experience naturally and explicably leading to mistaken judgements about the world, along the various lines sketched above.

I should also say here, both that there are clearly many more cases to consider, and also that the details of the specific accounts which I have so far given may well need to be amended in various ways. I do contend, though, that (OV) has ample scope to provide a satisfactory account of all illusions along some such lines. Indeed, (OV) is in my view demonstrably no worse off in this respect than any version of (CV). According to (CV), illusions are cases in which the world's being a certain way naturally and explicably gives rise to a perceptual representation of its being some systematically distorted way. Whatever account is given here, of the relevant distortion, is equally available on (OV), as an explanation of the way in which perceptual experience whose subjective character is constituted by the world's being precisely that way in the relevant respects naturally and explicably results in correspondingly mistaken judgements.

Of course, an entirely different account has to be given of pure hallucination, although I would begin by stressing the comparative rarity of genuine such cases, in which there is absolutely no perceptual access to anything at all in the mind-independent empirical world, however misleading this may be to judgement. The claim would be that pure hallucination is simply a failed attempt at any such perceptual access, to be characterized only derivatively by reference to the perceptible features of purely

qualitatively described empirical things which would be accessible were the world to be as the subject quite mistakenly takes it to be.

## V

In final conclusion, then, I claim that the (OV) version of (P) provides the most promising account of the nature of perceptual experience in connection with vindicating our commonsense commitment to empirical realism. This account is in my view independently highly compelling and richly explanatory. So I recommend buying the whole package.

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